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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,384	01/28/2008	Naoki Sumi	1176/305	3320

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LIU & LIU
444 S. FLOWER STREET, SUITE 1750
LOS ANGELES, CA 90071

EXAMINER
MALDONADO, JULIO J

ART UNIT	PAPER NUMBER
2823	

NOTIFICATION DATE	DELIVERY MODE
05/06/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

wliu@liulaw.com
julien@liulaw.com
docket@liulaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/540,384	SUMI, NAOKI	
	Examiner	Art Unit	
	JULIO J. MALDONADO	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-18,24,25,27-29 and 32-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14-16,18 and 32-37* is/are allowed.

6)☒ Claim(s) *27-29* is/are rejected.

7)☒ Claim(s) *17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The cancellation of claims 1-13, 19-23, 26, 30 and 31 as set forth in the applicants' reply filed on 04/28/2011 is acknowledged.

2. Claims 14-18, 24, 25, 27-29 and 32-37 are pending in the application.

Allowable Subject Matter

3. The indicated allowability of claim 27 is withdrawn in view of the newly discovered reference(s) to Ahn et al. (U.S. 6,259,119 B1) in view of Kimura (U.S. 5,610,741). Rejections based on the newly cited reference(s) follow.

4. The indicated allowability of claim 29 is withdrawn in view of the newly discovered reference(s) to Kimura (U.S. 5,610,741) in view of Shiraki et al. (U.S. 5,671,026). Rejections based on the newly cited reference(s) follow.

Claim Objections

5. Claim 17 is objected to because of the following informalities: in claim 17, line 5, where the applicants recite, "...wherein said insulating film...", change to --wherein said insulating film--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn et al. (U.S. 6,259,119 B1, hereinafter Ahn) in view of Kimura (U.S. 5,610,741).

Ahn (Figs.3, 4e and 7a) discloses an electronic display device including a first base (111, 113, 115, 117) comprising a first conductive portion and a second conductive portion, said first conductive portion containing a first metal and inherently having a first equilibrium electrode potential, said second conductive portion being electrically connected to said first conductive portion and containing a second metal or metal compound having a second electrode potential, wherein said first base comprises a supporting member (111), wherein said first conductive portion is formed on said supporting member (111) and said second conductive portion is formed so as to lie on said first conductive portion, wherein said first conductive portion is at least part of a gate terminal (117), and wherein said second conductive portion is at least part of a gate bus (115); an underlying layer (139) formed on said base (111, 113, 115, 117); and a pixel electrode (153) comprising a reflective material formed on said supporting member (111) (Ahn, column 5, line 33 – column 7, line 46).

Ahn fails to disclose an underlying layer formed on said first base, wherein said underlying layer comprises coating portions provided at positions corresponding to said plurality of projections or recesses; and an underlying main portion formed using photosensitive material, said underlying layer main portion covering said coating portions; and said reflective portion comprising a plurality of projections or recesses.

However, Kimura (Figs.2 and 4A-D) discloses an electronic device including a first base (88, 55); an underlying layer (66) formed on said first base (88, 55); and a reflective portion (54) formed on a surface of said underlying layer (66), said reflective portion (54) comprising a plurality of projections of recesses; wherein said underlying layer (66) comprises coating portions (88) provided at positions corresponding to said plurality of projections or recesses; and an underlying layer main portion formed using photosensitive material, said underlying layer main portion covering said coating portions (88) (Kimura, column 9, line 19 – column 13, line 21).

It would have been obvious to one of ordinary skill in the art a the time the invention was made to combine the teachings of Ahn and Kimura to enable coating projections in the pixel region of Ahn according to Kimura, because this would avoid degradation of the image display quality (Kimura, column 5, lines 7 - 10).

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura ('741) in view of Shiraki et al. (U.S. 5,671,026, hereinafter Shiraki).

Kimura (Figs.2 and 4A-D) discloses an electronic device including a first base (78, 55); an underlying layer (66) formed on said first base (78, 55); and a reflective portion (54) formed on a surface of said underlying layer (66), said first base comprising a supporting portion (78) and said reflective portion (54) comprising a plurality of projections of recesses; wherein said underlying layer (66) comprises coating portions (88) provided at positions corresponding to said plurality of projections or recesses; and an underlying layer main portion formed using photosensitive material, said underlying

layer main portion covering said coating portions (88) (Kimura, column 9, line 19 – column 13, line 21).

Kimura discloses wherein the first base (78, 55) further comprises a bottom-gate or top-gate thin film transistor device (55), and further including gate electrode materials comprising tantalum and source/drain terminals comprising molybdenum (Kimura, column 10, lines 14 - 45), but fails to further disclose a first conductive portion and a second conductive portion, said first conductive portion containing a first metal or metal compound having a first equilibrium electrode potential, said second conductive portion being electrically connected to said first conductive portion and containing a second metal or metal compound having a second equilibrium electrode potential, wherein said first conductive portion is formed on said supporting member and said second conductive portion is formed so as to lie on said first conductive portion, wherein said first conductive portion is at least part of a source terminal, and wherein said second conductive portion is at least part of a gate electrode of an ESD transistor.

However, Shiraki (Figs.1-5) discloses a related display device including a supporting member (1) having a display region and a peripheral region; a top gate thin film transistor structure (8) formed on the display region; and an ESD protective device (10) formed in the peripheral region; wherein the ESD protective device (10) further comprising a first conductive portion (23b) formed on said supporting member (1), said first conductive portion (23b) comprising a source terminal; and a second conductive portion (21) formed on said first conductive portion (23b), wherein said second

conductive portion comprises a gate electrode of said ESD protective device (10) (Shiraki, column 8, line 64 - column 13, line 64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kimura and Shiraki to enable an ESD protective device in Kimura according to the teachings of Shiraki for the further advantage of protecting the display device against electrostatic electricity (Shiraki, column 3, lines 5 – 15).

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn ('119) in view of Kimura (741) as applied to claim 27 above, and further in view of Watanabe et al. (U.S. 2002/0146871 A1, hereinafter Watanabe).

The combination of Ahn and Kimura discloses wherein said first conductive portion includes may include, aluminum, copper or gold and wherein said first conductive portion is at least part of a gate terminal, and wherein said second conductive portion may include molybdenum or an alloy comprising molybdenum and wherein said second conductive portion is at least part of a gate bus (Ahn, see Fig.3 and column 7, lines 10 – 45), but fails to disclose wherein said first conductive portion is made of indium oxide.

However, Watanabe (Fig.1) discloses a thin film transistor structure include a gate structure (2) made of aluminum, chromium, tungsten, molybdenum, AlCr, AlTi, AlPd, tin oxide, indium oxide, indium tin oxide, or a material obtained by laminating a plurality of conductive materials (Watanabe, [0057]).

It would have been within the scope of one of ordinary skill in the art to combine the teachings of Ahn and Kimura with Watanabe to enable first conductive portion of the combination of Ahn and Kimura to comprise the materials disclosed in Watanabe because one of ordinary skill in the art would have been motivated to look to analogous art teaching alternative suitable or useful materials for the disclosed gate structure of the combination of Ahn and Kimura and art recognized suitability for an intended purpose has been recognized to be motivation to combine (MPEP 2144.07), and furthermore, because the fact that the claimed combination of elements was "obvious to try" might show that such combination was obvious under 35 U.S.C. §103, since, if there is design need or market pressure to solve problem, and there are finite number of identified, predictable solutions, person of ordinary skill in art has good reason to pursue known options within his or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation (KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007)).

Allowable Subject Matter

10. Claims 14-16, 18 and 32-37 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIO J. MALDONADO whose telephone number is

(571)272-1864. The examiner can normally be reached on Mon-Fri, 8:00 A.M.-4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571)-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Julio J. Maldonado
Primary Examiner
Art Unit 2823

/Julio J. Maldonado/
Primary Examiner, Art Unit 2823